Exploring the Extreme			
2006 Science			
Grade Level and Grade Span Expectations			
New Hampshire Science			
Grades K-2			
Activity/Lesson	**State**	**Standards**	
Finding the Center of Gravity Using Rulers	NH	SCI.K-2.S:ESS4:2:2.1	Recognize, and with assistance, safely demonstrate the use of tools to gather data and extend the senses, such as thermometers, hand lenses and balances.
Finding the Center of Gravity Using Rulers	NH	SCI.K-2.S:SPS1:2:1.4	Ask questions that lead to exploration and investigation as a result of working with materials and objects.
Finding the Center of Gravity Using Plumb Lines	NH	SCI.K-2.S:PS3:2:2.1	Describe the many different ways things can move, such as in a straight line, zigzag or circular motion, back and forth, and fast and slow.
Changing the Center of Gravity Using Moment Arms	NH	SCI.K-2.S:ESS4:2:2.1	Recognize, and with assistance, safely demonstrate the use of tools to gather data and extend the senses, such as thermometers, hand lenses and balances.
Changing the Center of Gravity Using Moment Arms	NH	SCI.K-2.S:PS3:2:2.2	Describe and demonstrate how the position and motion of an object can be changed by applying force, such as pushing and pulling; and explain that the greater the force, the greater the change.
Exploring the Extreme			
2006 Science			
Grade Level and Grade Span Expectations			
New Hampshire Science			
Grades 3-4			
Activity/Lesson	**State**	**Standards**	
Finding the Center of Gravity Using Rulers	NH	SCI.3-4.S:ESS1:4:1.4	Explain how the use of scientific tools helps to extend senses and gather data about weather (i.e., weather/wind vane– direction; wind sock– wind intensity; anemometer– speed; thermometer– temperature; meter sticks/rulers– snow depth; rain gauges– rain amount in inches).
Finding the Center of Gravity Using Rulers	NH	SCI.3-4.S:ESS4:4:2.1	Demonstrate the use of simple instruments to collect weather data, including thermometers, windsocks, meter sticks, and rain gauges.
Finding the Center of Gravity Using Plumb Lines	NH	SCI.3-4.S:LS1:4:1.2	Sort/classify different living things using similar and different characteristics; and describe why organisms belong to each group or cite evidence about how they are alike or not alike.

Finding the Center of Gravity Using Plumb Lines	NH	SCI.3-4.S:LS1:4-3.4	Predict, sequence, or compare the life stages of organisms (plants and animals): e.g., put images of life stages of an organism in order, predict the next stage in sequence, and compare two organisms.
Changing the Center of Gravity Using Moment Arms	NH	SCI.3-4.S:ESS4:4:2.1	Demonstrate the use of simple instruments to collect weather data, including thermometers, windsocks, meter sticks, and rain gauges.
Changing the Center of Gravity Using Moment Arms	NH	SCI.3-4.S:SPS4:4:6.1	Plan and conduct a scientific investigation in group settings.
Changing the Center of Gravity Using Moment Arms	NH	SCI.3-4.S:SPS4:4:8.1	Establish ongoing communication with students from other communities or countries to share and compare data.
Exploring the Extreme			
2006 Science			
Grade Level and Grade Span Expectations			
New Hampshire Science			
Grades 5-6			
Activity/Lesson	**State**	**Standards**	
Jet Propulsion	NH	SCI.5-6.S:PS2:6:3.3	Recognize that energy, in the form of heat, is usually a by-product when one form of energy is changed to another, such as when machines convert stored energy to motion.
Jet Propulsion	NH	SCI.5-6.S:SPS1:6:1.1	Make observations and record measurements using a variety of tools and instruments.
Vectoring	NH	SCI.5-6.S:PS3:6:2.2	Explain that an object's motion can be tracked and measured over time and that the data can be used to describe its position.
Vectoring	NH	SCI.5-6.S:PS4:6:1.1	Understand that scientific principles are used in the design of technology.
Center of Gravity, Pitch, Yaw	NH	SCI.5-6.S:ESS4:6:1.1	Understand that technology is used to design tools that improve our ability to measure and observe the world.
Fuel Efficiency	NH	SCI.5-6.S:SPS2:6:1.1	Explain that scientists do not pay much attention to claims about how something works unless they are backed up with evidence that can be confirmed with a logical argument.
Fuel Efficiency	NH	SCI.5-6.S:SPS2:6:2.3	Estimate or predict the effect that making a change in one part of the system will have on other parts, and on the system as a whole.

Fuel Efficiency	NH	SCI.5-6.S:SPS2:6:3.1	Understand that models are often used to think about processes that happen too slowly, too quickly, or on too small a scale to observe directly; or that are too vast to be changed deliberately; or that are potentially dangerous.
Exploring the Extreme			
2006 Science			
Grade Level and Grade Span Expectations			
New Hampshire Science			
Grades 7-8			
Activity/Lesson	**State**	**Standards**	
Vectoring	NH	SCI.7-8.S:SPS4:8:8.1	Develop and execute a plan to collect and record accurate and complete data from various sources to solve a problem or answer a question; and gather and critically analyze data from a variety of sources.
Center of Gravity, Pitch, Yaw	NH	SCI.7-8.S:SPS4:8:4.2	Use evidence collected from observations or other sources and use them to create models and explanations.
Fuel Efficiency	NH	SCI.7-8.S:SPS4:8:2.1	Use a wide range of tools and a variety of oral, written, and graphic formats to share information and results from observations and investigations.
Fuel Efficiency	NH	SCI.7-8.S:SPS4:8:3.3	Make sketches, graphs, and diagrams to explain ideas and to demonstrate the interconnections between systems.
Fuel Efficiency	NH	SCI.7-8.S:SPS4:8:4.2	Use evidence collected from observations or other sources and use them to create models and explanations.